

Service Regional Office, 500 Gold Avenue SW., Room 4000, Albuquerque, New Mexico 87103.

**FOR FURTHER INFORMATION CONTACT:** Peggy Olwell, Endangered Species Botanist, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766-3972 or FTS 474-3972).

**SUPPLEMENTARY INFORMATION:**

**Background**

The proposed rule to list *Mammillaria thornberi* as a threatened species was published in the *Federal Register* on April 24, 1984 (49 FR 17551). This proposal was supported by biological information in the status report (Phillips *et al.* 1981), which indicated that this species was limited in distribution and numbers, and had a variety of threats. Two major population areas were known at the time of the proposal; the species was locally common in the Avra Valley, and occasional to rare on the Tohono O'odham (formerly Papago) Indian Reservation. About 600 plants were observed on the two areas; nearly 200 of these occurred on the Indian Reservation. Surveyors estimated 9 square kilometers (3.4 square miles) of potential habitat in the Avra Valley. Because grazing and agriculture had degraded the habitat on the Reservation, the potential habitat area was difficult to estimate. The plants on the Reservation were in poor condition, were rarer and smaller than those in the Avra Valley, and there were a higher percentage of dead plants. Populations in the Avra Valley appeared healthy. All populations faced a variety of threats, including habitat loss or degradation due to residential and agricultural development, construction of the Central Arizona aqueduct (CAP), grazing, and groundwater depletion.

After the proposal was published, the Service received new data that indicated *Mammillaria thornberi* was more abundant and widespread than previously believed. On June 10, 1985 (50 FR 24241), the proposed rule was extended because more time was needed to gather and evaluate new biological information. Several studies documented new populations or supplied new data on previously identified populations. Reichenbacher (1984a) observed 1,635 plants along the proposed CAP route in the Avra Valley. A 1985 survey of Organ Pipe Cactus National Monument, the westernmost locality of *Mammillaria thornberi*, located 235 individuals. Rutman (1985) observed 454 plants on Saguaro National Monument West, the species' easternmost locality. Nearly 900 plants

were found on Bureau of Land Management lands in the Avra Valley (Butterwick, BLM-Phoenix, pers. comm., 1985). Additional surveys of selected areas on the Tohono O'odham Indian Reservation located nearly 1,700 plants (Tierra Madre Consultants 1984, Reichenbacher 1984b). About 5,000 plants were observed on the total area of land searched. No accurate estimate of total plant numbers is available because the amount of potential habitat is difficult to assess. *Mammillaria thornberi* occurs on lower bajadas (alluvial slopes) and large-scale basins separated by mountain ranges. The patchy distribution of habitat on a regional scale, as well as on a local scale, are features that have complicated the estimation of habitat area.

At this time *Mammillaria thornberi* is sufficiently abundant and widely distributed, and the magnitude and immediacy of threats are sufficiently limited, that withdrawal of the rule as proposed is not inconsistent with the purposes of the Endangered Species Act. The ecosystem on which *M. thornberi* depends will be sufficiently conserved that it is not likely to become an endangered or threatened species within the foreseeable future throughout all or a significant portion of its range.

In the proposed rule the Service identified the following threats: (1) Habitat loss due to development in the Avra Valley and Tohono O'odham Indian Reservation; (2) recreational use of habitat increasing the take of this cactus; and (3) construction of the CAP aqueduct will also destroy plants and habitat. Despite these threats, there are three reasons why the Service believes it is appropriate to withdraw the proposed rule. First, distribution and abundance information obtained after publication of the proposed rule has expanded the known range and abundance of the species. The known range now includes localities spanning an area 120 miles from east to west. Researchers have counted at least 5,000 plants, and have speculated that more than 250,000 plants may exist. Secondly, *Mammillaria thornberi* will be protected on four safe sites: Saguaro National Monument, Organ Pipe Cactus National Monument, Tucson Mountains County Park, and 11.1 square kilometers (4.25 square miles) of land set aside in the Avra Valley by the Bureau of Reclamation for CAP mitigation. Thus, populations will be protected on both the easternmost and the westernmost extensions of the species' range. Third, land management policies and mitigation efforts have diminished the

**Fish and Wildlife Service**

**50 CFR Part 17**

**Endangered and Threatened Wildlife and Plants; Notice of Withdrawal of the Proposed Rule To List *Mammillaria thornberi* as a Threatened Species; Withdrawal of Proposed Rule**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Withdrawal of proposed rule.

**SUMMARY:** The U.S. Fish and Wildlife Service is withdrawing the proposed rule (April 24, 1984; 49 FR 17551) to list *Mammillaria thornberi* (Thornber's fishhook cactus) as a threatened species. New data have revealed a wider distribution and greater numbers than previously known. The Service has determined that this species is not likely to become endangered in the foreseeable future.

**ADDRESSES:** The complete file for this notice is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife

effects of two severe threats. The City of Tucson requires landowners in the Avra Valley to retain 80 percent of their land as undisturbed space. In addition, the Bureau of Reclamation is seeking to minimize losses of *Mammillaria thornberi* by monitoring construction activity to prevent unnecessary habitat destruction and by transplanting *Mammillaria thornberi* plants to a protected mitigation area.

On reviewing the current distribution, abundance, degree of protection, and severity of threats to this species, the Service has determined that the withdrawal of the proposed rule to list *Mammillaria thornberi* as threatened is consistent with the Endangered Species Act.

Ongoing studies will contribute to our understanding of this species. The Desert Botanical Garden, in cooperation with the University of Arizona and the National Park Service, is conducting a study that will analyze land use patterns in the Avra Valley from 1935 to 1985, and will also predict future changes. Other studies are presently being conducted to further define the distribution and abundance of *Mammillaria thornberi*. These studies are expected to help the Service continue to assess the status of this species.

#### References Cited

- Phillips, A.M., B.G. Phillips, N. Brian, L.T. Green, and J. Mazzoni. 1981. Status report on *Mammillaria thornberi*. U.S. Fish and Wildlife Service, Office of Endangered Species, Albuquerque, NM. 15 pp.
- Reichenbacher, F.W. 1984a. Rare plants of the Central Arizona Project, Tucson Aqueduct, Phase B. Final Report. U.S. Fish and Wildlife Service, Office of Endangered Species, Albuquerque, NM. 61 pp.
- Reichenbacher, F.W. 1984b. Rare plant survey: Selected areas of the Shuk Toak and San Xavier Districts of the Papago Indian Reservation. Franzoy-Corey Engineering Co., Tempe, AZ. 62 pp.
- Rutman, S. 1985. The distribution of *Mammillaria thornberi* on Saguaro National Monument, Tucson Mountain Unit, AZ. Saguaro National Monument, Tucson, AZ. 24 pp.
- Tierra Madre Consultants. 1984. Letter on file. U.S. Fish and Wildlife Service, Office of Endangered Species, Albuquerque, NM. 2 pp. plus map.

#### Author

This rule was prepared by Sue Rutman, Endangered Species Biologist, U.S. Fish and Wildlife Service, P.O. Box

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Accordingly, the proposed rule published April 24, 1984 (49 FR 17551) is hereby withdrawn.

Dated: July 9, 1987.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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